

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of:

Jeffrey G. Cheng et al.

Examiner: Philip A. Guyton

Application No.: 10/672,180

Group Art Unit: 2113

Filed: September 26, 2003

Docket No.: 00100.03.0032

For: **METHOD AND APPARATUS FOR
MONITORING AND RESETTING
A CO-PROCESSOR**

APPELLANTS' REPLY BRIEF IN RESPONSE TO EXAMINER'S ANSWER

Dear Sir:

This Reply Brief is in response to the Examiner's Answer mailed December 23, 2008.

On pages 12, 13 and 14 of the Examiner's reply, it appears that the Examiner is misapprehending the claim language and the teaching of the Forsman reference. Claim 1 requires, for example, a hang detector module "operative to detect a hang in the coprocessor by detecting a discrepancy between a current state of the coprocessor and a current activity of a coprocessor". It is the detection of a hang that is based on both a current state of the coprocessor and current activity of the coprocessor. The subsequent structure in the claim refers to the "resetting" of a coprocessor. There is a distinction in the claim as to the "detection" versus the "resetting" operations. Appellant respectfully submits that the Forsman reference only describes "detection" as based on a single event and that is the non-existence of a handshake "heartbeat signal 206". Appellant respectfully submits that the status/control register as taught in Forsman is only used in the "recovery operation" (i.e., resetting operation). As stated by Forsman in column 4:

initialize, test, and then monitor system operations.

25 In the present invention, when host 202 fails to detect a
heartbeat signal 206 from service processor 204, the entire
data processing system is not powered down. Instead, host
202, or service processor 204, attempts to recover full
30 operations of service processor 204 by initiating a hard reset
of the service processor in which the service processor
jumps back into the monitoring mode of operation without
using JTAG/I²C buses 210 to gather configuration and/or
test results. Furthermore, such hard reset of service proces-
sor 204 is performed in a way that does not disturb host 202
35 usage of shared resources.

In instances where the service host 202 initiates the
communications recovery with service processor 204, host
202 checks the status portion of status/control register 208 in
hardware logic 212 to determine if conditions exist that
40 preempt host 202 from resetting service processor 204. A
few of examples of this type of status are when service
processor 204 is in a special debug mode used by
developers, when service processor 204 is in the process of
handling a critical event, and when service processor 204 is
45 attempting to recover from a self detected error.

If no status exceptions are found, then host 202 proceeds
to set a bit in the control portion of status/control register
208 to cause a non-maskable interrupt to service processor
204 indicating that a hard reset of service processor 204 is
50 about to commence. This provides a warning to service

As set forth above, the word “detect” in line 24 indicates that the heartbeat signal, and only the heartbeat signal, is used to detect whether a hang has occurred. Only the recovery operation in Forsman (e.g., lines 36-45) uses the status/control register – not the “detection” operation. The Examiner’s rejection is incorrect since it is untrue as stated by the Examiner that “in order to detect a hang of service processor, two events must occur – a heartbeat signal is not received, and the status/control register must indicate a normal status of the service processor.” (Reply, page 13, lines 5-8). As shown above, the status/control register is not used to detect any hang condition but is only used after detection of a hang has already occurred. The register instead is used only to determine whether the host can initiate a recovery or reset operation after a hang condition has already been detected.

As to claim 26, Appellant also reasserts the remarks made above and as such, the Examiner's basis and reasoning is contrary to the teachings of the reference therefore, must be reversed.

As to claim 35, Appellant again notes that the Examiner's rejection actually confuses the detection and recovery operations as set forth in Forsman and appears to combine these operations as a single detection operation in an effort to invalidate Appellant's claims which is incorrect in view of the actual teachings set forth in Forsman as noted above.

For at least these reasons and/or reasons set forth in Appellant's Brief, Appellant respectfully submits that the Examiner's rejections must be reversed.

Respectfully submitted,

Date: February 23, 2009

By: /Christopher J. Reckamp/
Christopher J. Reckamp
Registration No. 34,414

Vedder Price P.C.
222 N. LaSalle Street
Chicago, Illinois 60601
PHONE: (312) 609-7599
FAX: (312) 609-5005